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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/761,950	01/17/2001	Francesco Natalini	108041-0012	6194

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CESARI AND MCKENNA, LLP
88 BLACK FALCON AVENUE
BOSTON, MA 02210

EXAMINER

WEST, JEFFREY R

ART UNIT PAPER NUMBER

2857

DATE MAILED: 07/05/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/761,950

Applicant(s)

NATALINI ET AL.

Examiner

Jeffrey R. West

Art Unit

2857

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 May 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 May 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: "222" (page 10, line 21 and page 13, line 13) and "732" (page 19, line 3).

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign(s) not mentioned in the description: "305", "309", "315", "406", "502", "504", "505", "514", "515", "612", "614", "703", "709", "816", "904".

3. The drawings are objected to because of the following informalities:

The drawings in Figure 1 are not clear, specifically in respect to the "monitoring substations". For example, the substation for the washing machine shows "37" and "32" labeling the same part, as with "32" and "35" in the oven substation, and "37" and "34" in the freezer substation. It is unclear why the "adapter 34" is a separate component connected to the washing machine substation, but an included part of the freezer substation. It is also unclear why "32" and "34" both label "N.I." (i.e. non intelligent) appliances.

In Figure 2, the sensor "220" pictured in the washing machine should be "120" as it is described on page 13, line 7.

In Figure 9, the step labeled "806" is not the same as the step labeled "806" in Figure 8.

4. A proposed drawing correction, corrected drawings, or amendment to the specification to add the reference sign(s) in the description, are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

5. The abstract of the disclosure is objected to because it is longer than the 150 word limit. Correction is required. See MPEP § 608.01(b).

6. The disclosure is objected to because of the following informalities:

On page 2, lines 1-2, "According, the user when requests" should be ---
Accordingly, when the user requests---

On page 19, line 20, "(Steps 814)" should be --- (Step 814) ---.

On page 7, line 8, "appliances 14-20" should be --- appliances 14, 16, 18, and 20 ---. Similarly, on page 16, line 2, "(steps 506-512)" should be --- (steps 506, 508, 509, 510, and 512) ---.

On page 10, lines 22-23, it is unclear how a RAM can be an EEPROM.

On page 12, line 8, the "door" is incorrectly labeled "204" instead of "212" as it is labeled on page 10, line 14 and in Figure 2.

On page 13, line 18, the "motor" is incorrectly labeled "110" instead of "108" as it is labeled on page 13, line 3 and in Figure 2.

On page 13, line 19, the "door" is incorrectly labeled "112" instead of "110" as it is labeled on page 13, line 3 and in Figure 2.

On page 14, lines 16-17, the description is not in accordance with Figure 4 because it presents step 403 (or step 305) as setting associated flags

On page 21, line 2, the applicant refers to Figure 12, when there is no Figure 12. Appropriate correction is required.

Claim Objections

7. Claims 14, 15, and 24 are objected to because of the following informalities:

Claims 14, 15, and 24 are objected because of confusing reference numerals in the claims. Claim 14 lists steps "d." and "e." while there is no step "c." in the parent claims. Claim 15 lists steps "iv.", "v.", and "vi.", while there is no mention of steps "i.-iii." in the parent claims. Claim 24 lists groups A and E with no mention of groups B-D.

Also, in claim 24, "a c center for receiving the messages" should be ---a center for receiving the messages---.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1, 3, 9, 12, 13, 20, 24, and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,236,332 to Conkright et al. in view of U.S. Patent No. 4,977,394 to Manson et al.

Conkright discloses a system for monitoring, controlling, and servicing a plurality of electrical apparatuses, such as lighting systems located at a plurality of households (column 1, lines 60-61), comprising one or more monitoring subsystems associated with each apparatus (column 5, line 66 to column 6, line 2) wherein each monitoring subsystem periodically determines if it needs to monitor its associated electrical apparatus (column 5, lines 42-49), and if so, obtains operating condition data, as well as energy consumption data (column 1, lines 31-41), of the electrical apparatus, analyzes the data to detect an alert condition, and, if an alert condition is determined, transmits over a wireless service gateway and corresponding network (column 3, lines 53-54 and 61-65) an alert notification signal to a central computer (column 5, lines 50-60) and further to a customer monitoring the device through installed subscriber software (column 3, lines 25-43). Conkright also discloses polling the monitoring subsystems by the central computer (column 7, lines 55-60) to determine the state of the apparatus, whether or not a fault condition requiring service exists (column 8, lines 18-27), and determining if the fault indicates a

complete failure or a partial failure (column 8, lines 35-49). Conkright then discloses that if it is determined that one or more of the apparatuses requires service, the state of the particular component that requires service is determined and the action needed to fix the problem is sent to a service worker who corrects the fault condition according to a service contract between the user and supplier (column 9, lines 22-29 and 64-66). Conkright then discloses notifying the user that the fault has been corrected (column 10, lines 35-40).

Conkright, however, teaches monitoring electrical apparatuses but does not specify that the apparatuses are household appliances.

Manson teaches a diagnostic system for an automatic appliance comprising gathering and storing data during the operation of the automatic appliance so that upon malfunction of the appliance the data can be retrieved and analyzed to determine the cause of the malfunction (column 2, lines 49-53) as well as issuing a warning to the user that the appliance is undergoing an error and needs attention (column 13, lines 40-50). Manson then teaches that upon issuance of a warning determining whether the warning indicates an error that requires action by the user of the device, and correspondingly displays what error exists so that the user may correct the problem, or determines that a call should be placed to a skilled service person for the proper maintenance (column 16, lines 26-55).

It would have been obvious to one having ordinary skill in the art to modify the invention of Conkright to include monitoring household appliances, as taught by Manson, because Conkright does disclose the application of the system for many

different electrical apparatuses (column 6, lines 9-12) and, as suggested by Manson, the combination would have provided a method for determining service requirements of an apparatus that is usually controlled by unskilled users who would need detailed service information rather than skilled workers who could easily correct the problem (column 2, lines 35-45).

10. Claims 2, 6, 7, 14, 15, 17, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Konkright in view of Manson and further in view of U.S. Patent No. 6,297,742 to Canada et al.

As noted above, Konkright and Manson teach many features of the claimed invention including transmitting data by the subsystems based upon predetermined times or polling by the central computer (column 6, lines 29-32 and column 8, lines 18-27) but do not teach producing a signal that displays whether the appliance requires immediate attention or non-immediate attention, or grouping the functional data over time into statistical historical data for analysis at the central computer.

Canada teaches a system and device for monitoring the operation of a machine and producing an operational history (column 2, lines 39-40) comprising a monitor for sensing, analyzing, storing, and outputting various operating data of a device (column 4, lines 24-27), including several values that determine preventive maintenance (column 5, lines 13-44), wherein the device's operational data is stored over time to form a statistical history trend (column 31-55) which is transmitted to an external computer to be stored and compared against previously stored usage trend

data for fault diagnosis (column 9, line 63 to column 10, line 14). Canada also teaches determining when a fault exists (column 12, lines 61-66) and displaying the occurrence of the fault to the user with a system that distinguishes between a fault that is severe and requires immediate attention or repair and a fault that is intermediate and requires no action on the part of the user (column 13, lines 12-25).

It would have been obvious to one having ordinary skill in the art to modify the invention of Conkright and Mason to include producing a signal that displays whether the appliance requires immediate attention or non-immediate attention and grouping the functional data over time into statistical historical data for analysis at the central computer, as taught by Canada, because, as suggested by Canada, the combination would have provided a method for insuring that critical faults are taken care of immediately while lesser faults that are not critical to the system can be corrected when convenient using a method that reduces cost and manpower (column 13, lines 39-42 and line 66 to column 14, line 6) and, by comparing the current operational trend with a historical trend, allowed for a determination of the device's remaining useful life (column 10, lines 11-14).

With respect to claims 6 and 17, Canada teaches indicating a fault immediately after its occurrence, and although Canada doesn't specifically disclose sending a non-critical fault along with a later occurrence of a critical fault, it would have been obvious to one having ordinary skill in the art to modify the invention of Conkright, Manson and Canada to include this step since Canada does disclose the equivalent method of providing the occurrence of a non-critical fault, not requiring immediate

attention by the user, which can be download for analysis whenever it is convenient rather than forcing the user to correct the problem when it occurs (column 13, lines 35-39).

11. Claims 4, 5, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Conkright in view of Manson and Canada and further in view of U.S. Patent No. 5,124,908 to Broadbent.

As noted above, Conkright in combination with Manson and Canada teach many of the features of the claimed invention including performing service according to a service contract and determining whether the service should be completed by the user or a skilled worker, but do not teach determining if preventive maintenance is required and performing the maintenance if the user has a maintenance contract.

Broadbent teaches a user interactive expert machine controller comprising a plurality of sensors attached to a machine to monitor a plurality of predetermined machine operating conditions (column 2, lines 65-68). Broadbent then teaches polling the monitor to determine any error conditions of the machine (column 3, lines 38-51) and updating a timer value that is compared to a predetermined value to determine if non-error service or maintenance is required (column 3, lines 52-59).

It would have been obvious to one having ordinary skill in the art to modify the invention of Conkright, Mason, and Canada to include determining and performing preventive maintenance if required, as taught by Broadbent, because, as suggested by Broadbent, the combination would have provided a method for preventing future

failure of the device by maintaining the device being monitored in good condition in a way that requires very little knowledge of the machine and very little user intervention (column 1, lines 51-62).

Further, it would have been obvious to one having ordinary skill in the art to include determining if the user has a maintenance contract since Conkright does disclose performing service based on a service contract and the combination would have provided a method for performing the maintenance under conditions in which the supplier has already been compensated and authorized to do so.

12. Claims 8 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Conkright in view of Manson and Canada and further in view of U.S. Patent Application Publication No. 2001/0032109 to Gonyea et al.

As noted above, Conkright in combination with Mason and Canada teach all of the features of the claimed invention except for determining if and when an appliance should be replaced based on patterns of use and providing, according to a replacement contract, the delivering and installation of a replacement appliance that fits the pattern of use.

Gonyea teaches a system and method for predicting a maintenance schedule and costs for performing future service events of a product comprising inputting operating conditions of the product through a network to a server computer (0013) and based upon a comparison between the operating environment, operating conditions, and the pattern of use (i.e. wear and tear on a part over time based on

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the operating conditions), over a period of time corresponding to the length of a service agreement (i.e. contract), and a predetermined limit that determines when a part should be replaced (0026 and 0027). Gonyea also teaches determining repair and replace limits and providing new parts that remain within the determined usage limits (0050) by searching and maintaining an inventory (0055 and 0056) according to the conditions of a maintenance contract (0058).

It would have been obvious to one having ordinary skill in the art to modify the invention of Conkright, Mason, and Canada to include determining if and when an appliance should be replaced based on patterns of use and providing, according to a replacement contract, the delivering and installation of a replacement appliance that fits the pattern of use, as taught by Gonyea, because the combination would have provided a replacement part that would last longer by withstanding the operating conditions and, as suggested by Gonyea, provided a method that obtains maximum use of a component by using the component up to a failure limit but eliminates a potential failure by changing the part before exceeding the limit (0027).

13. Claims 10 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Conkright in view of Manson and further in view of EP Patent No. 0 725 181 A1 to Aisa et al.

As noted above, Conkright and Manson teach all of the features of the claimed invention except for specifying that the monitoring include monitoring the settings of the appliances and appliance's ambient environment.

Aisa teaches a method for managing the control of a household appliance (column 2, lines 26-30) by taking into account the settings presented by the user (column 7, lines 1-17) as well as the ambient environmental conditions in which the components of the appliance operate (column 5, lines 20-27).

It would have been obvious to one having ordinary skill in the art to modify the invention of Conkright and Manson to include specifying that the monitoring include monitoring the settings of the appliances and appliance's ambient environment, as taught by Aisa, because, Aisa suggests that the combination would manage the household appliance in such a way as to obtain the maximum global performance in relation to a determined functional condition (column 3, lines 32-37)

14. Claims 11, 22, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Conkright in view of Manson and Aisa and further in view of Canada et al.

As noted above, Conkright in combination with Manson and Aisa teach all of the features of the claimed invention except for grouping the functional data over time into statistical historical data for analysis at the central computer.

Canada teaches a system and device for monitoring the operation of a machine and producing an operational history (column 2, lines 39-40) comprising a monitor for sensing, analyzing, storing, and outputting various operating data of a device (column 4, lines 24-27), including several values that determine preventive maintenance (column 5, lines 13-44), wherein the device's operational data is stored

over time to form a statistical history trend (column 31-55) which is transmitted to an external computer to be stored and compared against previously stored usage trend data for fault diagnosis (column 9, line 63 to column 10, line 14). Canada also teaches determining when a fault exists (column 12, lines 61-66) and displaying the occurrence of the fault to the user with a system that distinguishes between a fault that is severe and requires immediate attention or repair and a fault that is intermediate and requires no action on the part of the user (column 13, lines 12-25).

It would have been obvious to one having ordinary skill in the art to modify the invention of Conkright, Manson, and Aisa to include grouping the functional data overtime into statistical historical data for analysis at the central computer, as taught by Canada, because, as suggested by Canada, the combination would have provided a method for comparing a current trend with a historical trend to allow for a determination of the device's remaining useful life (column 10, lines 11-14)

15. Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Conkright in view of Manson and further in view of U.S. Patent No. 5,839,097 to Klausner.

As noted above, Conkright and Manson teach all of the features of the claimed invention except for analyzing a plurality of appliances located in the same household.

Klausner teaches a control computer, which can provide wireless remote control (column 3, lines 12-17), including a device for a functional check, diagnosis, and

error search of a plurality of home appliances, including blinds, a washing machine, lighting device, dishwasher, and a heating system (column 3, lines 61-64) connected to a bus system (column 3, lines 19-21) by polling sensors located in the appliances and analyzing the output of the sensors determine errors (column 5, lines 26-40).

It would have been obvious to one having ordinary skill in the art to modify the invention of Conkright and Manson to include analyzing a plurality of appliances located in the same household, as taught by Klausner, because, as suggested by Klausner, the combination would have provided a method for allowing a user to control the operation, determine errors, and eliminate errors for all of the critical appliances in a house (column 5, lines 37-40).

Conclusion

16. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

U.S. Patent No. 6,006,171 to Vines et al. teaches a dynamic maintenance management system.

U.S. Patent No. 6,211,782 to Sandelman et al. teaches an electronic message delivery system utilizable in the monitoring of remote equipment.

U.S. Patent No. 5,594,663 to Messaros et al. teaches a remote diagnostic tool having an interface coupled to an instrument for inspection of the instrument variables as well as managing information resources necessary to repair the instrument.

U.S. Patent No. 5,642,284 to Parupalli et al. teaches a maintenance monitor system that compares operational information to predetermined sets of operational information to indicate when maintenance is due.

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey R. West whose telephone number is (703)308-1309. The examiner can normally be reached on Monday through Friday, 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marc S. Hoff can be reached on (703)308-1677. The fax phone numbers for the organization where this application or proceeding is assigned are (703)308-7382 for regular communications and (703)308-7382 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0956.

jrw
July 1, 2002


MARC S. HOFF
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800